

CLAIMS

What is claimed is:

1. A method of sharing resources on a grid network, comprising:
configuring a host to include a grid virtual machine and a second virtual machine;
allocating resources on the host to the grid virtual machine; and
executing a grid application in the grid virtual machine.
2. The method according to Claim 1 wherein allocating the resources further comprises a virtual machine manager allocating at least the portion of the resources.
3. The method according to Claim 2 wherein a resource manager allocates resources to the grid virtual machine to supplement the resources allocated by the virtual machine manager.
4. The method according to Claim 3 further comprising the resource manager performing dynamic load balancing on the grid network.
5. The method according to Claim 1 wherein the second virtual machine is configured to run applications other than the grid application.
6. The method according to Claim 1 wherein the grid virtual machine is isolated from the second virtual machine.
7. The method according to Claim 1 further comprising:
retrieving predefined policies for the grid virtual machine; and
monitoring the grid virtual machine to determine if the grid virtual machine violates the predefined policies.

8. The method according to Claim 7 wherein the predefined policies include predefined resource thresholds for the grid virtual machine.
9. The method according to Claim 8 further comprising a resource manager taking appropriate action if the grid virtual machine violates at least one of the predefined policies.
10. The method according to Claim 9 wherein the resource manager taking action further comprises at least one of the resource manager automatically limiting resources available to the grid virtual machine, and the resource manager notifying a user that the grid virtual machine violated at least one of the predefined policies.
11. An article comprising a machine-accessible medium having stored thereon instructions that, when executed by a machine, cause the machine to:
configure a grid virtual machine and a second virtual machine on a grid network;
allocate resources to the grid virtual machine; and
execute a grid application in the grid virtual machine.
12. The article according to Claim 11 wherein the instructions, when executed by the machine, further cause the machine to startup a virtual machine manager, the virtual machine manager capable of allocating at least the portion of the resources to the grid virtual machine.
13. The article according to Claim 12 wherein the instructions, when executed by the machine, further cause the machine to startup a resource manager, the resource manager capable of allocating resources to the grid virtual machine to supplement the resources allocated by the virtual machine manager.

14. The article according to Claim 13 wherein the instructions, when executed by the machine, further cause the resource manager to perform dynamic load balancing on the virtual network.
15. The article according to Claim 11 wherein the instructions, when executed by the machine, is capable of configuring the second virtual machine to run applications other than the grid application.
16. The article according to Claim 11 wherein the instructions, when executed by the machine, further cause the machine to isolate the grid virtual machine from the second virtual machine.
17. The article according to Claim 11 wherein the instructions, when executed by the machine, further cause the machine to:
retrieve predefined policies for the grid virtual machine; and
monitor the grid virtual machine to determine if the grid virtual machine violates the predefined policies.
18. The article according to Claim 17 wherein the instructions, when executed by the machine, further cause the machine to retrieve predefined resource thresholds for the grid virtual machine.
19. The article according to Claim 17 wherein the instructions, when executed by the machine, further cause the machine to startup a resource manager capable of taking appropriate action if the grid virtual machine violates at least one of the predefined policies.
20. The article according to Claim 19 wherein the instructions, when executed by the machine, further cause the machine to at least one of automatically limit the resources available to the grid virtual machine, and notify a user that the grid virtual machine violated at least one of the predefined policies.

21. A system to share resources on a grid network, comprising:
- a grid virtual machine on a host capable of executing a grid application;
 - a second virtual machine on the host coupled to the grid virtual machine;
 - a virtual machine manager on the host, the virtual machine manager coupled to the grid virtual machine and the second virtual machine on the host, the virtual machine manager capable of allocating the host's resources to the grid virtual machine and the second virtual machine; and
 - a resource manager on the host, the resource manager coupled to the virtual machine manager, the grid virtual machine and the second virtual machine, the resource manager capable of allocating resources to the grid virtual machine to supplement the resources allocated by the virtual machine manager.
22. The system according to Claim 21 wherein the resource manager is additionally capable of retrieving predefined policies for the grid virtual machine and monitoring the grid virtual machine to determine if the grid virtual machine violates the predefined policies.
23. The system according to Claim 22 wherein the resource manager is additionally capable of taking appropriate action if the grid virtual machine violates at least one of the predefined policies.
24. The system according to Claim 23 wherein the resource manager is additionally capable of taking appropriate action by at least one of automatically limiting the resources available to the grid virtual machine, and notifying a user that the grid virtual machine violated at least one of the predefined policies.
25. A grid network, comprising:
- a first host capable of running a first grid virtual machine and a second virtual machine; and
 - a second host coupled to the first host, the second host capable of running a second grid virtual machine and a third virtual machine, the first grid virtual

machine and the second grid virtual machine capable of simultaneously executing a grid application.

26. The grid network according to Claim 25 wherein the first host includes a first resource manager and the second host includes a second resource manager, the first resource manager and the second resource manager each capable of allocating resources to the first grid virtual machine and second grid virtual machine respectively.
27. The grid network according to Claim 26 wherein the first resource manager and the second resource manager are additionally capable of retrieving policies for the first grid virtual machine and the second grid virtual machine respectively.
28. A method of sharing resources on a grid network, comprising:
 - retrieving predefined policies for a grid virtual machine on a host;
 - monitoring the grid virtual machine on the host to determine if the grid virtual machine violates the predefined policies; and
 - taking appropriate action if the grid virtual machine violates at least one of the predefined policies.
29. The method according to Claim 28 wherein monitoring the grid virtual machine additionally comprises allocating resources to the grid virtual machine as necessary.
30. An article comprising a machine-accessible medium having stored thereon instructions that, when executed by a machine, cause the machine to
 - retrieve predefined policies for a grid virtual machine on the machine;
 - monitor the grid virtual machine on the host to determine if the grid virtual machine violates the predefined policies; and
 - take appropriate action if the grid virtual machine violates at least one of the predefined policies.

31. The article according to Claim 30 wherein the instructions, when executed by the machine, further cause the machine to allocate resources to the grid virtual machine as necessary.